AlgoBulls Frontend Developer
Coding Assignment
November 2022

Project: Design a simple To-Do List App using React

Description:

You need to design a web-based to-do list application, as per the given requirements:

1. Tasks should be displayed in a Tabular format, using the [Ant Pro table](#) component.
2. The table should have the following columns:
    a. Timestamp created: Timestamp at which a task was created.
       Should be auto set when creating a new entry. A user should not be able to edit this.
    b. Title: Title of the task to be done.
        i. A user can set this while creating a new entry. A user can also change this updating existing entry.
        ii. Max length: 100 characters.
        iii. Mandatory field
    c. Description: Description of the task to be done.
        i. A user can add details about this task.
        ii. Max length: 1000 characters
        iii. Mandatory field
    d. Due Date: Expected due date to finish the task
        i. A user can set this while creating a new entry. A user can also change this updating existing entry.
        ii. Optional field
    e. Tag: One or more tags which user can add to the entry
        i. A user can set this while creating a new entry. A user can also change this updating existing entry. Multiple tags can be added to the same entry
        ii. Optional field
        iii. Multiple tags with the same value should be saved only once.
    f. Status: Shows status of a task
        i. Should be one of these values.
            1. OPEN (Default value)
            2. WORKING
            3. DONE
            4. OVERDUE
        ii. Mandatory field
3. The table should support pagination.
4. User should be able to perform the following operations:
    a. ADD a new to-do entry

b. MODIFY an existing to-do entry
　　　c. DELETE an existing to-do entry
　　　d. SORT the table using columns a., b., c. and d. given above in both ascending and descending formats
　　　e. FILTER the table using e. and f. Columns.
　5. Provide a search bar on the top where a user can perform a case-insensitive search for any task based on the data in any of the above-mentioned columns.
　6. Make use of mock APIs to ensure that the app is fully functional.
　　[No database or backend coding required.]

Technology to be used for creating this application:

Frontend:
　1. Ant Design Pro v4+
　　https://github.com/ant-design/ant-design
　　https://github.com/ant-design/ant-design-pro
　　Ant Pro Table: https://github.com/ant-design/pro-table
　2. [BONUS] DVA

Note:
　1. You can assume things that are not defined with a reasonable value. For example, we have not defined the pagination size. You can assume it as 15 or 20 or any other number which is generally acceptable.
　2. Add validation checks anywhere there is a possibility of an obvious violation of general logic. Example: 'Due Date' field value cannot be before 'Timestamp created' field value
　3. Implement necessary design principles wherever possible. For example, when a user tries to DELETE an existing to-do entry, it is good to ask first for a confirmation from the user before firing the DELETE api. The design should look complete.
　4. Explore Ant Design sufficiently so you can use the available features from the existing widgets smartly. This will be preferred over creating completely new components. Feel free to take design inspiration from https://app.algobulls.com.

Objective:
　1. Please come up with a sleek frontend that can accommodate all the requirements.

Duration:
The ideal time is 3 days. If you need extra time, please request the same with appropriate reasoning.

How to submit:

1. Deploy your application on any cloud service provider like AWS, GCP, Azure, etc. and send us a link to your working application.
2. Please upload your code on a private GitHub repo and share it with the following GitHub user-ids - **algobulls-dev**, **hruturaj-nikam-algobulls**
3. Make sure your code is cleaned up as per standards, before you do the final submission. It is ok to keep pushing any number of intermediate code commits.
4. Add sufficient comments for complex logic, before you do the final submission.
5. Include a README that includes basic documentation on how to run the code.
6. Once done, please send a mail to both developers@algobulls.com & hruturaj.nikam@algobulls.com, mentioning your name and GitHub ID, requesting a review. Attach this coding assignment pdf to the mail as well.
7. If selected for an interview, we may request you to set up a screen-sharing session for discussion purposes.

Asking for clarification/hints:
Please send an email to developers@algobulls.com & hruturaj.nikam@algobulls.com with your query and we will get back to you.